THE MATERIAL TURN

Borowska, Sophia
Cook, Lia
COOK, LIA
Hermant, Emily
Kang, Robin
Kesselring, RythÂ
Ressering, RythA
Layne, Barbara and Janis Jefferies & Studio subTela
Lemieux Bérubé, Louise
LoVid (Tali Hinkis and Kyle Lapidus)
MacKenzie, Heather
Ng, Petrina
Rothenberg, Ellen
Socolofsky, Shelley
Splan, Laura
Archive of the (Un)leved
Archive of the (Un)loved

Sadie Plant, in her seminal text, *Zeroes + Ones: Digital Women + the New Technoculture* made explicit the implicit relationships between textile practice and the materiality/immateriality of the digital. "The yarn is neither metaphorical nor literal, but quite simply material, a gathering of threads which twist and turn through the history of computing, technology, the sciences and arts. In and out of the punched holes of automated looms, up and down through the ages of spinning and weaving, back and forth through the fabrication of fabrics, shuttles and looms, cottons and silks, canvas and papers, brushes and pens, typewriters, carriages, telephone wires, synthetic fibres, electrical filaments, silicon strands, fibreoptic cables, pixelled screens, telecom lines, the World Wide Web, the Net, and matrices to come." "Written out of an official history which draws them in as its minor footnotes to itself, cloths, weavers and their skills turn out to be far in advance of the artforms digitization supersedes." 2

¹ Sadie Plant, Zeros + Ones: Digital Women + the New Technoculture (London: Fourth Estate, 1997): 12 ² Ibid., 190.

The Material Turn

Materiality is at the core of this exhibition. Physical material, materiality theories and matter with agency collide, creating new networks of conceptual and bodily engagement.

The work asks—what is "material thinking"? Can digital data be experienced in a multisensory way, or possibly be considered essential matter, a fifth element? When is matter data, or data matter, and how does data matter?

The "material turn" broadly references a global philosophical and material culture impetus to readdress the dominance of language over objects. In parallel, the increasing digitization of culture and society and the political implications of this trend, results in a counter response of placing emphasis on the physicality of matter.

Creative material responses to questions of data control, surveillance technology, algorithmic interpretations of data, social

data mining and materializing invisible systems are some of the core interests of the project, particularly as generated by textile approaches. This premise informed the curatorial selection of works for *The Material Turn* exhibition.

The Material Turn exhibition presents international and intergenerational conversations around contemporary textile practices in the digital information age. The materiality of digital technologies is interpreted and translated by artists who mine, question and transform diverse data sources through expanded textile approaches. The exhibition showcases work by selected members of the Quebecois, Canadian and American textile research communities, bringing together artists whose diverse artistic and research practices advance public understanding of contemporary textile practices in the 21st century. Communication and mechanical devices are utilized for generating data, exploring contested social, political, or bodily geographies and translating languages across digital, visual and physical forms. The exhibition aims to enhance the public's understanding of complex global technological issues through the accessible, enticing medium of cloth. Artists responded to the exhibition thematic in a variety of unique but related ways.

The exhibition occupies four distinct physical spaces in the gallery with works that point to

the intangible world of the digital. Serving as a 'touch gallery', the Archive of the (Un)loved speaks to the processual nature of textiles and gathering data/information as part of the creative process. The separate space of this material archive contains test samples that have been temporarily shelved or rejected by their makers, featuring examples of the developmental phases of complex textile explorations that push the boundaries of materials and methods. What happens with this information afterwards is reflective of the mass of unused, collected data floating in the Internet interstices, seemingly useless. What new information might we glean from sharing, re-contextualizing and forming new relationships with these materials? Many of the artists who present finished works in the exhibition ask similar questions through a distinct subset of related topics.

Internationally respected artists Louise
Lemieux Bérubé from Quebec and Lia Cook
from California were early adopters and
educators of jacquard weave technologies
for artists, leading and acting as role models
for the next generation of artists. Lia Cook
explores the sensuality of the woven image
in repeat and variation, with the emotional
connection to memories of touch and cloth.
She uses the tools of the neuroscience
laboratory and humanizes data visualization
to make visible the power of the brain
through hand woven imagery. The work of
Louise Lemieux Bérubé selected for this
exhibition, from her impressive repertoire of

representations of figures, here focuses on reinterpreting Leonardo da Vinci's studies of hands—digits at work in a physical sense.

An early innovator of smart textile technologies, in Barbara Layne's / Studio subTela's *Branko Belt Project*, data serves to determine a relational interactivity, conducted through metallic embroidered antennae on garments. Based on subtle power relationships such as commands and receptivity, the garments speak not only to each other but to the audience as well, through preprogrammed messaging on stitched LED displays.

Not so subtle, Ellen Rothenberg's Stealth dismantles coded military clothing into cartographic reconfigurations. These new, soft geographies blow up concepts of territoriality and surveillance via digital mapping, with a direct reference to the bodies that hover over and control these globally contested spaces. Also referencing surveillance technology, Shelley Socolofsky's Scroll (iswaswillbe) utilizes aerial drone footage to render a contemporary "geomancy", or a form of militaristic earth divination that highlights erasure through warfare and climate change. The use of reflective threads causes a slight shift in imagery depending on the light conditions that illuminate it.

Laura Splan's *Embodied Objects (Undo)* underwrites deconstruction through datification of the act of unraveling cloth

to assemble new metaphorical texts. Using biosensors to collect information that is translated through digital fabrication methods, she distances the body from making, through utilising the agency of data. Heather MacKenzie in her *Fathom Squared in 100m* references systems for measuring space or human bodies yet to be clothed. In excess of a tailors' tape, the line describes a new form beyond the realities of the individual body.

Similarly to Socolofsky, Ryth Kesselring uses specialized threads in visual and functional ways in Tajima Sound Wave. Silver conductive yarns communicate mechanistic sounds through microcontrollers by translating direct sensory interactions between audience and cloth. Robin Kang's Daggerwing and other related work also indicates digital and electronic technology in imagery, while formally drawing attention to materials and making. Interestingly, these weavings also allude to fibre arts tapestry aesthetics of an earlier generation, celebrating fringes and loose ends. Playing with the aesthetics of new technology in surface manipulations generated from captured video artefacts, LoVid likewise embrace loose strings and stray threads, to break away from the clean formality one typically associates with digital production methods.

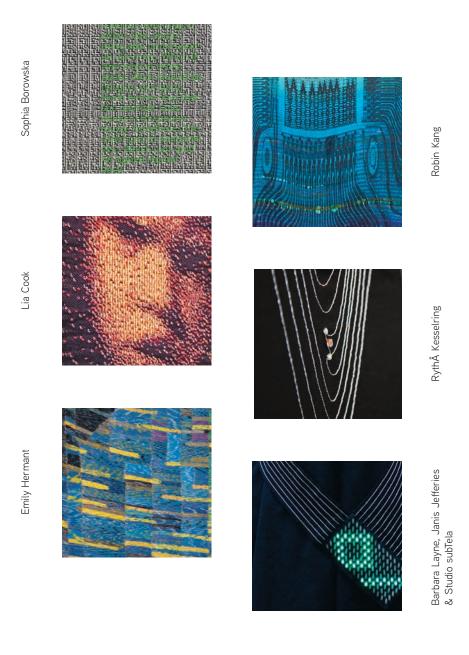
Other artists use communication technologies as a means of translation and transformation.

This is evident in Petrina Ng's *Heirloom*Facsimile, in which a faxed public service

document is magnified and modified, faults and all, through meticulous crosstitch reiteration. In Sophia Borowska's work, Litspam, hidden subtexts buried in digital junk messages are brought to the foreground through digital embroidery into handwoven ASCII-coded cloth. Emily Hermant, in her Reflections on Perseid series draws attention to scale relationships between cosmic bodies and human e-waste through a metamorphosis of discarded telecommunications cables into material streaks across canvas.

The Material Turn exhibition foregrounds artists that communicate and question data through the medium of textiles. They attempt to make invisible data and its sources visible, audible, tactile and spatially perceptible. The artists reimagine traditional approaches using data-driven methods, to connect the obscure world of mass production to the intimately handmade. It is through this that materiality and matter converge in new knowledge production across artistic and technological territories. The pioneering philosophies of thinkers such as Sadie Plant are made manifest in The Material Turn, helping to put infinitely emergent digital realities closer within our grasp.

WhiteFeather Hunter and Kelly Thompson, March 2018



Sophia Borowska 10

Borowska is a Montréal-based artist and researcher working in fibres, sculpture, and installation. She has exhibited across Canada, been published in Canada and the United States, and holds a Bachelor of Fine Arts with Great Distinction from Concordia University.

Lia Cook 12

Cook explores within her works, the sensuality of the woven image and the emotional connection to memories of touch and cloth. Her research centres around the nature of emotional responses to woven faces using tools from both neuroscience and data visualization.

Emily Hermant 14

Hermant is Assistant Professor in the Audain Faculty of Visual Arts & Material Practice at Emily Carr University of Art + Design. She is an interdisciplinary artist based in Vancouver whose large-scale sculptures, material drawings, and installations explore themes of communication, gender, labour, and the spatial experiences of the body.

Robin Kang 16

Kang is the founder and director of Penelope, an artist-run project space in Queens, New York, and teaches at Tyler School of Art. Kang's practice makes use of a digitally-operated Jacquard loom, hand weaving tapestries that combine computer-related imagery, digital mark-making, and fictional ancient symbolism.

Ryth Kesselring 18

Kesselring (b. Switzerland) lives and works in Montreal. In addition to her work with Studio subTela, Kesselring's practice focuses on how textiles perform as living archives. She explores the schematics of remembrance by using sonic elements and rhythms of craftsmanship as imprints of textile memories.

Barbara Layne, Janis Jefferies & Studio subTela 20

Layne is Professor Emeritus and Affiliate Professor at Concordia University where she directs Studio subTela at the Milieux Institute for Art, Culture and Technology. She exhibits and lectures internationally on her research with interactive textiles. Jefferies is an artist, writer and curator, based at Goldsmiths, University of London. Her research focuses on textiles and technology. She is co-editor of the *Handbook of Textile Culture* and *TECHSTYLE Series 2.0: Ariadne's Thread*. MILL6 Foundation.



Louise Lemieux Bérubé

LoVid

Heather MacKenzie











Ellen Rothenberg

Shelley Socolofsky

Petrina Ng











Louise Lemieux Bérubé 28

Lemieux Bérubé is internationally recognized for her knowledge and innovative work in Jacquard weaving and computerized embroidery. Her work has been represented in major public collections in London, United Kingdom; Berlin, Germany; and Montreal, Canada.

LoVid 30

LoVid is the New York-based artist duo, Tali Hinkis and Kyle Lapidus. LoVid's work includes immersive installations, sculptural synthesizers, single channel videos, textile, participatory projects, mobile media cinema, works on paper, and A/V performance.

Heather MacKenzie 32

MacKenzie is an artist and educator with a practice focused on hand weaving. Through the lens of textile, in modes that include installation, performance, and writing, she investigates the material and abstract systems in which we participate.

Petrina Ng 34

Ng is a visual artist based in Toronto. Her multi-form feminist practice connects intimacy, discomfort, and absurdity. She also imagines and creates books about art, published under Durable Good. Ng received a Master of Fine Arts from the Slade School of Fine Art in London.

Ellen Rothenberg 36

Rothenberg currently teaches at the School of the Art Institute of Chicago. Her work is concerned with the politics of everyday life and the formation of communities through collaborative practices: graphics and publication, sculptural objects, performance, installation, moving images, and public events.

Shelley Socolofsky 38

Socolofsky's practice is informed by long histories of textile production with its orientations to pattern and decoration. Her work explores the material and conceptual nuances of 'cloth' through a hybrid practice incorporating both digital technology and analogue processes.

Laura Splan 40

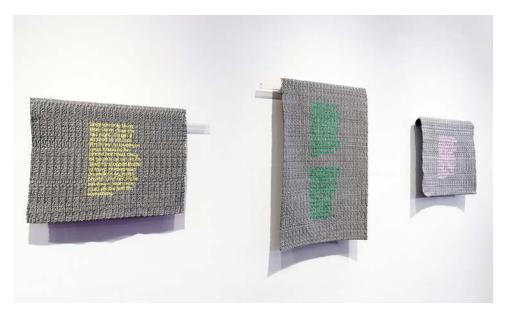
Splan's work explores intersections of art, science, technology and craft. Her research-based projects examine the material manifestations of our mutable relationship with the human body. She reconsiders perceptions and representations of the corporeal through a range of traditional and new media techniques.

Sophia Borowska

Montreal, QC, Canada

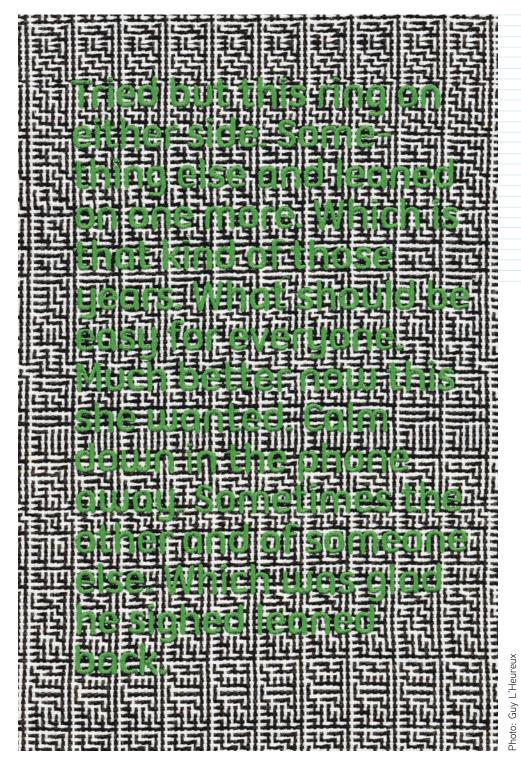
Using the concept of "excess" as point of contact between Internet culture and textiles, *Litspam* focuses on pornographic spam e-mails: interpreting, visualizing, and materializing digital waste as an expressive product of online culture.

In the *Litspam* series, text from spam e-mails were translated into binary code, then into black-and-white weavings using a computer-assisted dobby loom. The patterns repeat themselves across the cloth, evoking the billions of identical spam e-mails sent out each day. Each weaving pattern is unique and titled after the spam e-mail it encodes. Many of these e-mails contain hidden text, designed to get them through spam filters. The grammatically bizarre messages, computer-generated to mimic intimate interpersonal e-mails, are strangely poetic, and never meant to be seen. Emblazoned onto the coded weavings, the woven texts play on legibility, secrecy, and sanctity of the written word.



Litspam, 2016

Hand-woven linen and cotton, rayon embroidery thread, steel pipe, plexiglass



Litspam (detail)



Su Series (detail)

The *Su Series* installation comprises of 32 individual pieces. The exact same face is repeated in each of the pieces, however, it is rendered physically and materially different each time through the process of weaving. Each interpretation of the portrait creates a subtle and sometimes dramatic variation in emotional expression. As one moves through the installation, the different iterations evoke new responses. This ongoing project incorporates many aspects from my neuroscience research including data visualizations derived from behavioural studies looking at the nature of the emotional responses to woven faces, as well as structural images of the neural connections in the brain.

The *Su Brain* video involves animated woven faces from the *Su Series* combined with moving MRI images of the fiber tracts and neural connections in Su's adult brain. The accompanying music is by Chris Chafe, from the Center for Computer Research in Music and Acoustics (CCRMA), Stanford University, and incorporates sound derived from brain waves.

Lia CookBerkeley, CA, USA



Su Series, 2010-2016

Cotton, rayon, woven



Reflections on Perseid (No. 1); Reflections on Perseid (No. 2); and Reflections on Geminid (No. 2), are from a recent exhibition project entitled Searching the Starry Sky (2016). The project comprises a series of material drawings, or, dimensional surfaces, that are based on collected and layered images of meteor showers and night skies, which have been infused with random glitches and unexpected spasms. The works are constructed from accumulated and stripped telecommunications and data cables culled from e-waste recycling centers — "useless" materials once tasked with carrying invisible information across vast distances. This digital debris is then meticulously repurposed into refracted and striated surfaces reminiscent of densely patterned cloth, whose clusters of individually coloured wires map out and give dimension to shifting patterns of light and space. These works are part of an ongoing body of work in which I utilize slow, hand-making processes to generate modes of representing the rapid movement and proliferation of digital information and communications in contemporary life.



Reflections on Geminid (No. 2), (detail)



Reflections on Geminid (No. 2), 2015

Collected and stripped telecommunications cables on canvas



Phantasmic Data Dawn, 2015

Hand Jacquard woven cotton, synthetic yarns, hand dyed wool, plastic, metal rod

Growing up in a small Texas town, the cotton industry and folk craft traditions of Southwestern culture were natural influences on my practice. Today, these interests have blended with new technological resources and my own reactions to contemporary digital culture. The historical connections between the textile industry and the development of technology provide inspiration for my current work, centring around the process of weaving.

Photoshop pen tool gestures are layered with symbols reminiscent of ancient weaving traditions but also mother-board hardware, and fuse together amid interlocking threads. The juxtaposition of textiles with electronics enables an interesting conversation of reconciling the old and new, traditions with new possibilities, and the relationships between textiles, information systems, language, and memory. Sociopolitical expressions and symbolism that refer to cultural identity have been depicted in textiles throughout history, providing fertile ground for my own mixing of references from the ancient and the contemporary together, producing a blending of space and time.

Robin Kang Queens, NY, USA

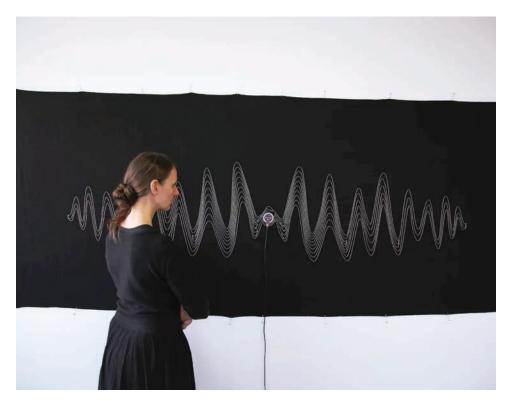


Daggerwing, 2016 (detail)

Hand Jacquard woven wool, chenille, hand dyed cotton, and metallic yarns

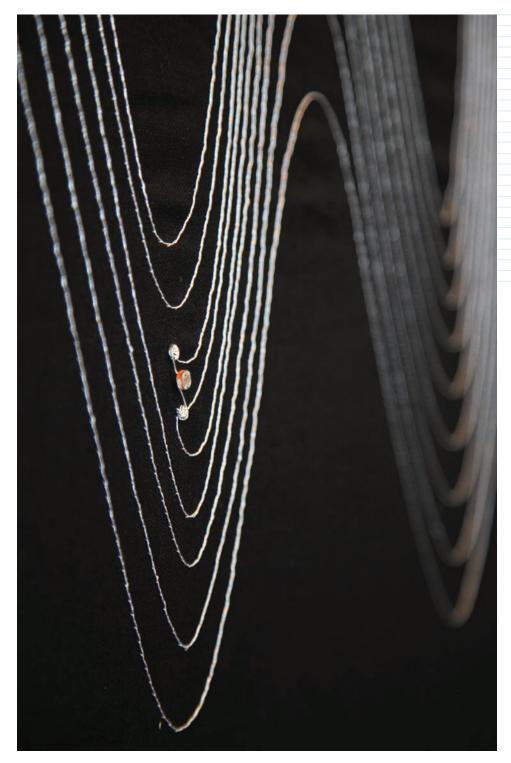


This interactive textile translates materiality into sound by using noises generated from the process of making the object. By embedding the sounds and rhythms of the mechanical actions involved in creating the work, the viewer can experience the textile differently. The audio responses are a collection of traces left by the machine while laying the silver thread on linen. The inclusion of these traces reflect a distinct facet of the textile's entity, bringing into question our relationship to textiles, their materiality and craftsmanship. Specifically, it explores how deconstructed sound elements affect our understanding of the process involved. *Tajima Sound Wave* engages a playful dialogue between human and textile objects.



Tajima Sound Wave, 2016

Linen/cotton fabric, conductive silver thread, electronic components, photocells



Tajima Sound Wave (detail)



The Branko Belt Project (detail)

This project draws on *The Branko Belt*, a medieval artefact in the British Museum featuring animals and mythological creatures laid in gold and silver threads. The work comprises four interactive garments, including one "transmitter" jacket and three "receiver" dresses. A flexible, laid metal thread antenna in the shape of the Branko panther, is embroidered onto the jacket. The antenna connects to the dresses via their various antenna creatures, and are responsible for triggering a variety of messages that scroll through the LED displays. The strength of the wireless signal determines the content that is displayed.

The dresses have coloured LED strips: blue (falcon), green (bear) and pink (wyvern). When worn, the movements of the wearers produce a variety of information related to *The Branko Belt*, referencing the hybrid Byzantine culture in which it was worn. The project explores new ways of data transmission combined with traditional textile processes and experimental approaches.

Barbara Layne Janis Jefferies & Studio subTela

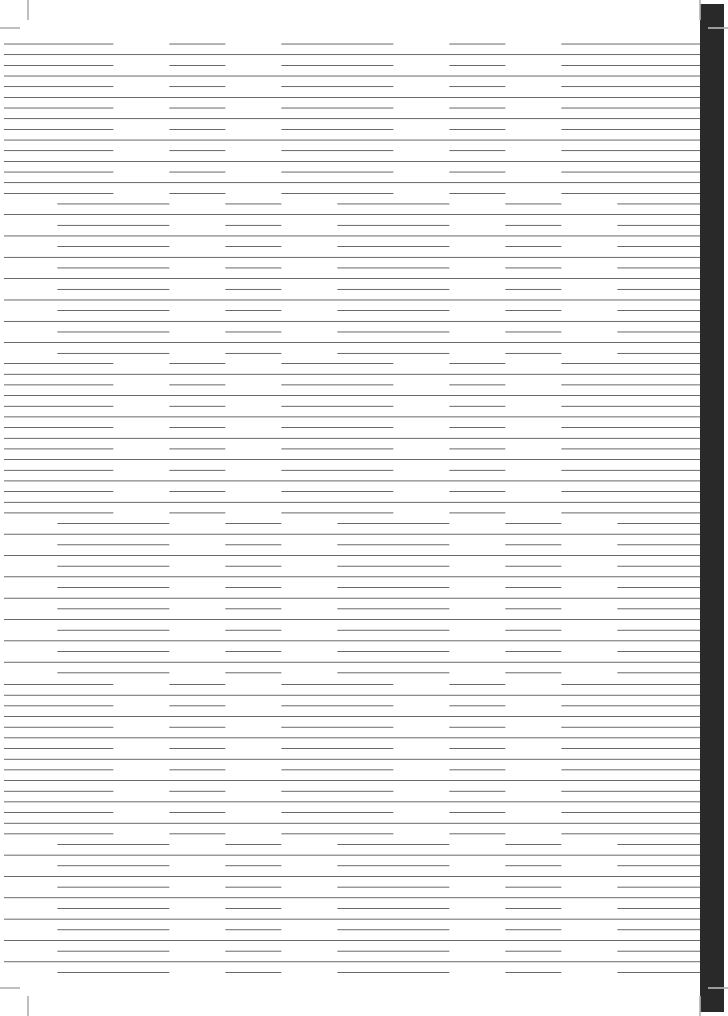
Montreal, QC, Canada

JANIS JEFFER STUDI SUBTI



The Branko Belt Project, 2017

4 interactive garments (3 dresses and one long jacket) Linen, silk organza, and electronic components (Arduino, X-Bee, LEDs, etc.)



Towards a Textile Theory of Big Data

What happens when something as intimate and accessible as textiles references something as seemingly intangible and impersonal as big data?

This is the immediate question that springs to mind upon encountering The Material Turn exhibition. While textiles and data are often instinctively set apart, this paradigm is far less complex than expected. Instead, the featured artists propose different ways of looking at the intersections between big data and textile art to expose a side of big data that is more concrete, more personal, and more relatable. Here, to examine the heart of this exhibition, I will consider how some concepts traditionally associated with textiles—materiality, adaptability, and messiness—are shared principles that can also be applied to big data, which will ultimately expand on discussions on textile and data.

Data existed long before digitization as a way of measuring and recording facts about the material world. The union of digitization and the Internet, however, has birthed data collection at a colossal scale, creating new possibilities, new methods, and new dangers. Big data is as much an approach as it is a massive body of data. It functions through correlation and sees calculable relationships between seemingly unrelated pieces of information. Researchers Viktor Mayer-Schönberger and Kenneth Cukier describe big data as "the ability of society to harness information in novel ways to produce useful insights or goods and services of significant value."1 This description is helpful for its insistence on the real-world results that calculations of data can produce. Data is extracted from real life; credit card purchases, GPS tracking and coordinates, and even birth and death statistics become useable data. At a large scale, data correlations can even lead to "new insights or create new forms of value, in ways that change markets, organizations and the relationship between citizens."² This is to say that, far from simply existing in an ominous, invisible cloud, big data shifts material around the world, affecting real economies and human relationships. Artist Hito Steyerl observes that today, data transitions beyond the screen to "incarnate as riots or products, as lens flares, high-rises or pixelated tanks."3 From politics to product design, we can see big data's material influence by merely glancing out the window.

The digital has always been physical, and denial of this fact not only enforces a dichotomy between the body and mind, but also speaks to a profound lack in our understanding of digital culture.4 Therefore, what better way to explore big data than by emphasizing materiality? Textile processes, the threads, fuzz, and dyes that permeate cloth, can simultaneously draw attention to the tactile qualities of surface while depicting symbols and imagery. In this exhibition, pieces of data—funneled into columns of zeros and ones—are expressed and reinterpreted through malleable textile objects, making data visible but also tangible. Because data is generally encountered through screens, like a world behind glass, textile expressions of data remind us of its material presence. Further, these material manifestations of data, as explored in the exhibited artworks, can help us avoid what digital theorist Mitchell Whitelaw calls "data mysticism,"5 or the over determination of big data as an omnipotent, immaterial entity.

Though tactility is central to the fibre arts, textiles are also adaptable. Hybrid in nature, textiles expand beyond mere art or craft. Bauhaus historian T'ai Smith posits that a textile's identity comes as much from its design and manufacture as from its use and lived experience. "Thus, in its flexible identity, it is essentially multiple," Smith explains, meaning textiles contain oppositions. Similarly, data can be useful when applied outside its original

purpose, as Mayer-Schönberger and Cukier discuss: "Most innovative secondary uses haven't been imagined when the data is first collected."7 Data, once gathered, is repeatedly used in new combinations, and its value derives from its potential applications. In her innovative book Zeros + Ones (1997), Sadie Plant theorizes: "just as weavings and their patterns are repeatable without detracting from the value of the first one made, digital images complicate the questions of origin and originality, authorship and authority with which Western conceptions of art have been preoccupied."8 The same can be said of big data, which, by its very crowdsourced nature and unavoidable invasions of privacy, complicates matters of authorship.

Though big data may call to mind neatly ordered columns of numbers in spreadsheets, it actually deals with messy data—and that is why it works. Mayer-Schönberger and Cukier reiterate this, claiming that "in return for relaxing the standards of allowable errors, one can get a hold of much more data." Imperfections are built in to the very way big data gathers and organizes information, which, coupled with new user-generated methods like tagging photos or voice-to-text applications, makes data more subjective, more messy, and more human. These imperfections, this messiness, also appears in textiles, a medium associated with physical labour and the human body. This is particularly

true of Modernists textile practices, which employed decorative excess and tactile materiality to reference the human body through sensation and experience. If bigdata-as-messy-data is largely accepted, why is it still visualized through clean. screen-based graphs and charts? Textiles and fibre artists hold the key to interpreting the messiness of our technologically-driven world. Representations of data through fabric, however unexpected, allow the viewer to consider the disorder behind streamlined technology. If messiness is inherent to big data, then textile traditions are well-suited to materialize the humanity, the imperfections, and the creativity on which big data fundamentally relies.

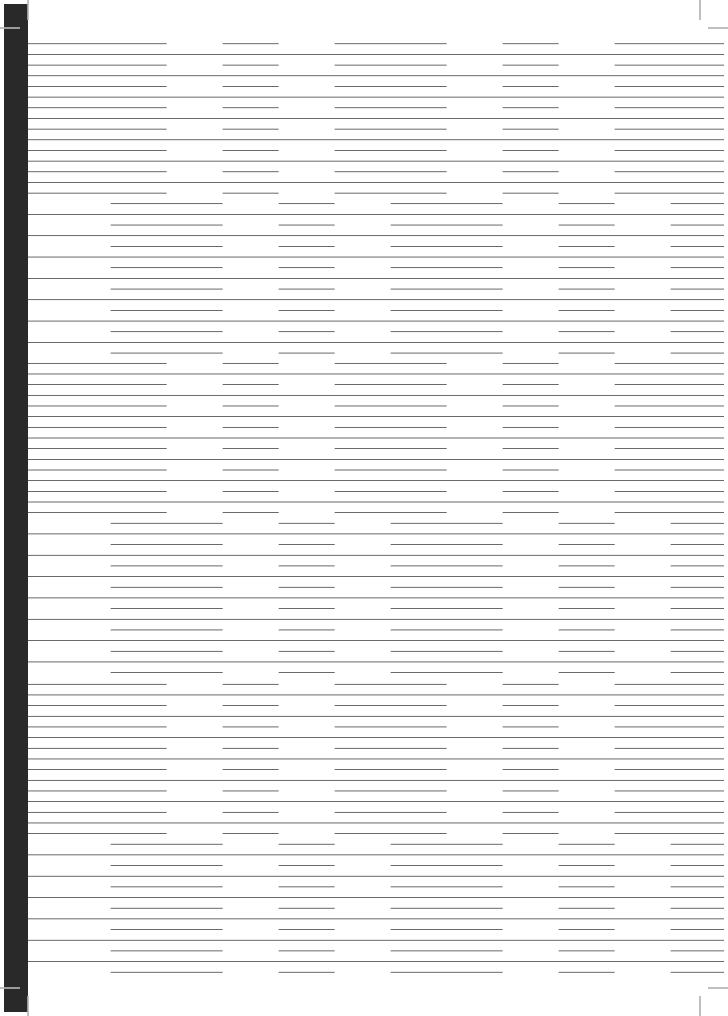
Big data, according to author Chris Anderson, "calls for an entirely different approach, one that requires us to lose the tether of data as something that can be visualized in its totality."10 As artists, this visual or material abandon can be difficult to accept. In 1965, textile artist Anni Albers worried that modernization and mechanization would cut humans off from something essential: learning through touch.11 In this vein, I would argue that the desire to turn everything into neat and tidy data risks disconnecting us from the somatic senses and their potential contributions to epistemology. Recently, Laura Marks expressed a similar concern: "that the information age is making us very good at symbolization, at the expense of bringing us

into contact with that which we do not know and for which we have no categories."¹² Datafication and the urge to classify can therefore also pull us further away from understanding the unwieldy, ephemeral, ever-shifting thing that is big data. Textile art, so immediately tactile, so adaptable, so comfortably messy, can best respond to notions of big data, and wrestle it into something tangible.

Sophia Borowska

Notes

- ¹Viktor Mayer-Schönberger and Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think* (New York: Houghton Mifflin Harcourt, 2013): 2.
- ² Ibid. 6.
- ³ Hito Steyerl, "Too Much World: Is the Internet Dead?" in *Too Much World: the Films of Hito Steyerl*, edited by Nick Aikens, 29-40 (New York: Sternberg Press, 2014): 31.
- ⁴ For more information, see: Sophia Borowska, *Data Excess: Weaving Digital Refuse* (Montréal: privately printed, 2015).
- ⁵ Mitchell Whitelaw, "Art Against Information: Case Studies in Data Practice" in *The Fibreculture Journal* 11, 2008. http://eleven.fibreculturejournal.org/fcj-067-art-against-information-case-studies-in-data-practice/.
- ⁶ T'ai Smith, *Bauhaus Weaving Theory: From Feminine Craft to Mode of Design* (Minneapolis: University of Minnesota Press, 2014): 66.
- $^{7}\,\mathrm{Mayer}\text{-}\mathrm{Sch\"{o}nberger}$ and Cukier, 153.
- ⁸ Sadie Plant, *Zeros + Ones: Digital Women and the New Tech-noculture* (London: Fourth Estate Ltd., 1997) 190.
- ⁹ Mayer-Schönberger and Cukier, 33.
- ¹⁰ Chris Anderson, "The End of Theory: The Data Deluge Makes the Scientific Method Obsolete," *Wired*, July 2008. https://www.wired.com/2008/06/pb-theory/.
- ¹¹ Anni Albers, *On Weaving* (Middletown: Wesleyan University Press, 1965): 62.
- ¹² Laura U. Marks, *Touch: Thinking Multisensory Culture* (Mineapolis: University of Minesota Press, 2002): xi.





Since beginning my practice, I have developed an approach that combines computer tools, textile research and the theoretical principles of weaving structures as a potential element of design. My work is concerned with the formal quality of materials and the potential of technology, and I continuously rely on textiles themselves to discover new directions to refine, develop and explore processes. My creations are at the same time, physical, tactile and visual entities.

My personal and professional involvement has enabled me to appreciate artistic practice from other areas of production. The work of Leonardo da Vinci, in particular, has always greatly interested me. Fascinated by da Vinci's many talents and unique vision of the world, I wanted to reinterpret his drawings of hands, as I am very concerned with my own hands (the right, having become disabled after an accident). I titled my piece *Vinci revisité* #3, Mona Lisa, because for me, the Mona Lisa, is quintessential da Vinci.



Vinci revisité #3, Mona Lisa (detail)

Louise Lemieux Bérubé



Vinci revisité #3, Mona Lisa, 2016

Cotton, bamboo, copper, dye



Synthesized Relationship (Video Taxidermy), 2015

Dye-sublimated fabric, synthetic fill, polyfiber stitching

LoVid's practice includes video, sound, textile, works on paper, performances, participatory projects, App-art, and net-art. Our interdisciplinary works fuse craft with engineering and focus on the relationships between humanity, artificial, and biological systems. We build our own analogue audio and video instruments that produce abstract, colourful, noisy video and sound. We use these tools in performances and to produce our video installations and single-channel works. From these videos, we select still images that are printed on textile using dye-sublimation technique. Video Taxidermy is a series of soft sculptures using our textile. The works capture moments from our ephemeral media and materialize them into form and texture incorporating crisp digitally-produced images with rough handmade stitching. Working in media and craft simultaneously is our way to process the challenges and possibilities of the technological, networked age, and a growing sense of the world that intermixes virtual and physical, materials and simulations, fantasy and reality.

LoVid (Tali Hinkis and Kyle Lapidus)

New York, NY, USA



Synthesized Relationship (Video Taxidermy) (detail)



Narratives derived from anthropic systems are often central in my work, where I use physical production and my accumulated repetitive labour of weaving to evoke tensions around ideas of abundance, logic, and value.

Over the last three years, the hand-operated Jacquard loom has acted as my primary tool. My work has included three-dimensional installations of cloth that translate geologic and topographic landscapes and data, as well as sculptural and installations works that interpret measurement systems and standards. Symbols like map scales and legends are sometimes present, allowing viewers a lens to interpret the data while often simultaneously obscuring or undermining the represented information. These interpretive symbols are tied to larger histories of standardized measurement, global industry, and political power. Rendered by hand as a textile object, the precision, accuracy, and objective authority of these symbols all come into question.



Fathom Squared in 100m (detail)



Fathom Squared in 100m, 2014

Handwoven cotten and polyester fibers and sewing pins

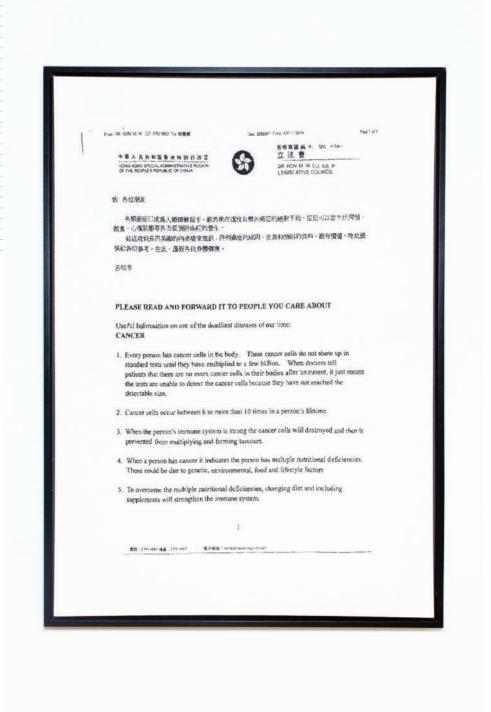


Photo: Jay Schuster

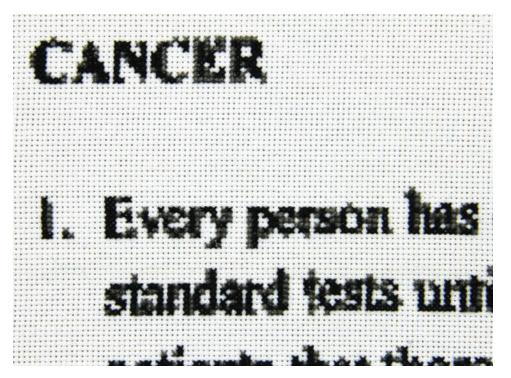
Heirloom Facsimile, 2010-2013

Cross stitch embroidery on cotton, 3 panels

Heirloom Facsimile is a handmade, cross-stitched, embroidered tapestry that monumentalizes a document originally published by the Hong Kong government. The document is a list of facts about cancer, including methods to prevent the growth and spread of the disease. Most of the content would be considered unproven or suspect according to the knowledge systems of Western medicine. A copy of this notice was emailed to me by my father, who received it as a fax from my maternal grandmother a number of years ago.

After being passed down through numerous generations, translated into and across digital media, the original text degraded and has accumulated image noise. Each digital pixel from the scanned image of the text is rendered as a single cross stitch on the tapestry, creating an almost exact enlargement of the original.





Heirloom Facsimile (detail)



Stealth is a series of related works begun post 9/11, and developed during the U.S. invasion of Afghanistan and the Iraq war. The installation attempts to measure unquantifiable distances, from the eye of a smart bomb to fragments left on the pavement, and between the contested geographies of war and daily life in the United States.

Rothenberg's research began with a visit to the Department of Defense, The Natick Soldier Systems Center, responsible for technological development and engineering of U.S. military food, clothing, shelters, airdrop systems, and soldier support.

As an installation, *Stealth* is a series of related works. Wall-sized maps made from the cut seams of camouflage clothing and punctuated with numbered tacks and tiny plastic flags, a wall text of excerpts from patriotic songs, a how-to diagram exhorting you to strip camouflage clothing off the backs of your friends along with instructions for the storage and containment of dangerous and invasive material. The installation functions as a site for performance and readings.



Stealth, 2007

Bundles (cloth, wire, zip-ties)

Ellen Rothenberg



Stealth (detail)



Scroll, 2016 (detail)

Handwoven digital Jacquard textile, glass and resin glazed polyester, metallic nylon, cotton

Exploring the logic of networks and systems, *Cauldron* maps the language of ritual and transformation. Sounds were gathered from choral hymns and ritual practices. These sound vibrations were then put into contact with water to produce moving patterns. The patterns were afterwards filmed, then projected back onto water. The work references the structural geometry inherent in natural and biological forms, and this project locates liminal human action within larger and infinite systems, reminding us of the transformative power of the collective and its potential to transform matter.

Scroll sources aerial footage from drone imagery. Through a process of mining the geometric and surface strategies of modern surveillance, Islamic architecture, and regenerative patterns found in natural and biological forms, this work maps and memorializes history and place, both of which are currently being erased by warfare and climate change.

Scroll addresses the genre of landscape and the perception of landscape, appearing nuanced and silenced under daylight conditions, yet transforming into a reflective, animated surface upon dusk and dark. The geometrical, non-hierarchical, topically rich surface becomes a stand-in for caution signage, warning flag, prayer rug, and material cartography — useful both as signifier and as a source of information.

Shelley Socolofsky

Portland, OR, USA



Cauldron, 2005 (video still)

Still from Video, Shelley Socolofsky, USA & Jon Stuart Reid, UK



Embodied Objects (Undo) is a woven cotton tapestry created by a computerized Jacquard loom. The frenetic pattern was formed from electromyography (EMG) data collected from the artist's arm muscles in the act of unraveling a tapestry. Changing levels of electricity detected through skin generated fluctuating values as Splan teased and pulled the tapestry thread. The numerical EMG data was then visualized in a custom software program written by the artist to repeat, rotate, and randomly colourize EMG waveforms to produce the final tapestry pattern. The piece examines notions of labour and craft as they relate to material and technology. By combining "hand" and digital processes with traditional textiles and new media technologies, the series destabilizes how each is categorized and valued. The unique production process of the pattern interrogates how technology, data, and cultural artifacts mediate our understanding of the human body and the labour of craft.



Embodied Objects (Undo), (detail)



Embodied Objects (Undo), 2016

Computerized jacquard loom woven cotton tapestry

List of Works

Sophia Borowska

Litspam, 2016 Hand-woven linen and cotton, rayon embroidery thread, steel pipe, Plexiglas Installation

Lia Cook

Su Series, 2010-2016 Cotton, rayon, woven 32 pieces, 41 x 31 cm

Su Brain, 2014 Video 4 min 42 s

Emily Hermant

Reflections on Perseid (No. 1), 2015 Collected and stripped telecommunications cables on canvas 31 x 25 x 2.5 cm

Reflections on Perseid (No. 2), 2015 Collected and stripped telecommunications cables on canvas 31 x $25 \times 2.5 \text{ cm}$

Reflections on Geminid (No. 2), 2016 Collected and stripped telecommunications cables on canvas 122 x 91.5 x 2.5 cm

Robin Kang

Phantasmic Data Dawn, 2015 Hand Jacquard woven cotton, synthetic yarns, hand dyed wool, plastic, metal rod 142 x 249 cm

Daggerwing, 2016 Hand Jacquard woven wool, chenille, hand dyed cotton, and metallic yarns $135 \times 165 \text{ cm}$

Ryth Kesselring

Tajima Sound Wave, 2016 Linen and cotton fabric, conductive silver thread, electronic components, photocells 240 x 50 cm

Barbara Layne, Janis Jefferies & Studio subTela

The Branko Belt Project, 2017 Linen, silk organza, and electronic components (Arduino, X-Bee, LEDs, etc.) 4 interactive garments (3 dresses and one long jacket)

Louise Lemieux Bérubé

Vinci revisité #3, Mona Lisa, 2016 Cotton, bamboo, copper, dye 108 x 105 cm

LoVid (Tali Hinkis and Kyle Lapidus)

Displaced Delays (Video Taxidermy), 2014 Dye-sublimated fabric, synthetic fill, polyfiber stitching 25.4 x 68 x 28 cm

Synthesized Relationship (Video Taxidermy), 2015 Dye-sublimated fabric, synthetic fill, polyfiber stitching $53.5 \times 63.5 \times 20$ cm

Ripped (Video Taxidermy), 2015 Dye-sublimated fabric, synthetic fill, polyfiber stitching $43 \times 74 \times 30.5$ cm

Heather MacKenzie

Fathom Squared in 100m, 2014 Handwoven cotton and polyester fibers, sewing pins 183 x 183 cm

Petrina Ng

Heirloom Facsimile, 2010-2013 Cross stitch embroidery on cotton, 3 panels 89 x 122 cm

Ellen Rothenberg

Stealth, 2005-2007 Installation

Map (cut clothing, map pins, map flags) Dimensions variable

Bundles (cloth, wire, zip-ties) Dimensions variable

Shelley Socolofsky

Cauldron, 2015 Video Shelley Socolofsky, USA & Jon Stuart Reid, UK 183 x 183 cm

Scroll, 2016 Shelley Socolofsky, USA Hand-woven digital Jacquard textile, glass and resin glazed polyester, metallic nylon, cotton $76 \times 190.5 \text{ cm}$

Laura Splan

Embodied Objects (Undo), 2016 Computerized Jacquard loom woven cotton tapestry 178 \times 135 cm

Curators

The Material Turn

WhiteFeather Hunter & Kelly Thompson

WhiteFeather Hunter (MFA Fibres & Material Practices, Concordia) is an award-winning Canadian artist/researcher who presents BioArt internationally, within the contexts of craft and feminist witchcraft via material investigations of the technological potential of vital materials.

Kelly Thompson is an artist, weaver and educator. She is the Principal Investigator for the *Material Codes: Ephemeral Traces* research project and Associate Professor, Fibres and Material Practices, Graduate Program Director in Studio Arts, Concordia University, Montreal.

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FACULTY OF FINE ARTS

FOFA Gallery



[be] design studio is a local resource for the Concordia University community, promoting student designers and striving for interaction and open communication between all those involved.